FY00 DII MAML Project XML Business Standards

Overview

- **Joint initiative funded by OSD as a FY00 DII project**
  - ➢ DLIS – Logistics Business Standards Framework and XML Registry/Repository
  - ➢ SPAWAR – Initial vocabulary development
    - – Material Asset Markup Language
    - – Documentation
    - – USMTF (XML-MTF)
  - ➢ 14 month effort, currently ½ way complete

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Joint Objectives of SPAWAR/DLIS Project

✓ **Establish a framework and an on-going process for the development of mutually agreed upon open standards to position the Logistics Community to fully capitalize on XML technologies as they become available.**

✓ **Develop a metadata and XML repository specifically designed to meet the Logistics community's needs for XML business agreement standardization.**

✓ **Conduct initial standards development and proof of concept demonstrations to validate proposed concepts.**

Currently there is no enterprise (DoD level) visibility of logistics data. DOD logistics systems exist in a legacy environment where disparate infrastructures, stovepipe implementations, lack of central authority, redundancies, and inadequate timeliness impede the sharing of information and reduce its quality.

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The Mission Need

At the Focused Logistics Wargame (FLOW) 2010 our Military leaders identified a need for logistics capabilities that horizontally integrate planning, decision making, and business operations across CSAs. They stated a planned Integrated Data Environment (IDE) must support the Warfighter's critical need for situational awareness, including proactive planning capabilities and tools, in a secured logistics environment.

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The Problem Definition

With the emergence of infrastructure such as the Navy/ Marine Corps Intranet (NMCI) and the vision of the Global Information Grid (GIG), a global, secure network is developing to allow universal access to logistics knowledge. However, no underlying information architecture exists to allow the seamless sharing of information within this environment. Until such an architecture is implemented and proven, providing a vendor/technology neutral, non-proprietary method for sharing information, efforts at data integration such as the DLA IDE, the GCSS portal, the USAF JAST IDE, and applications running on the NMCI will continue to struggle.

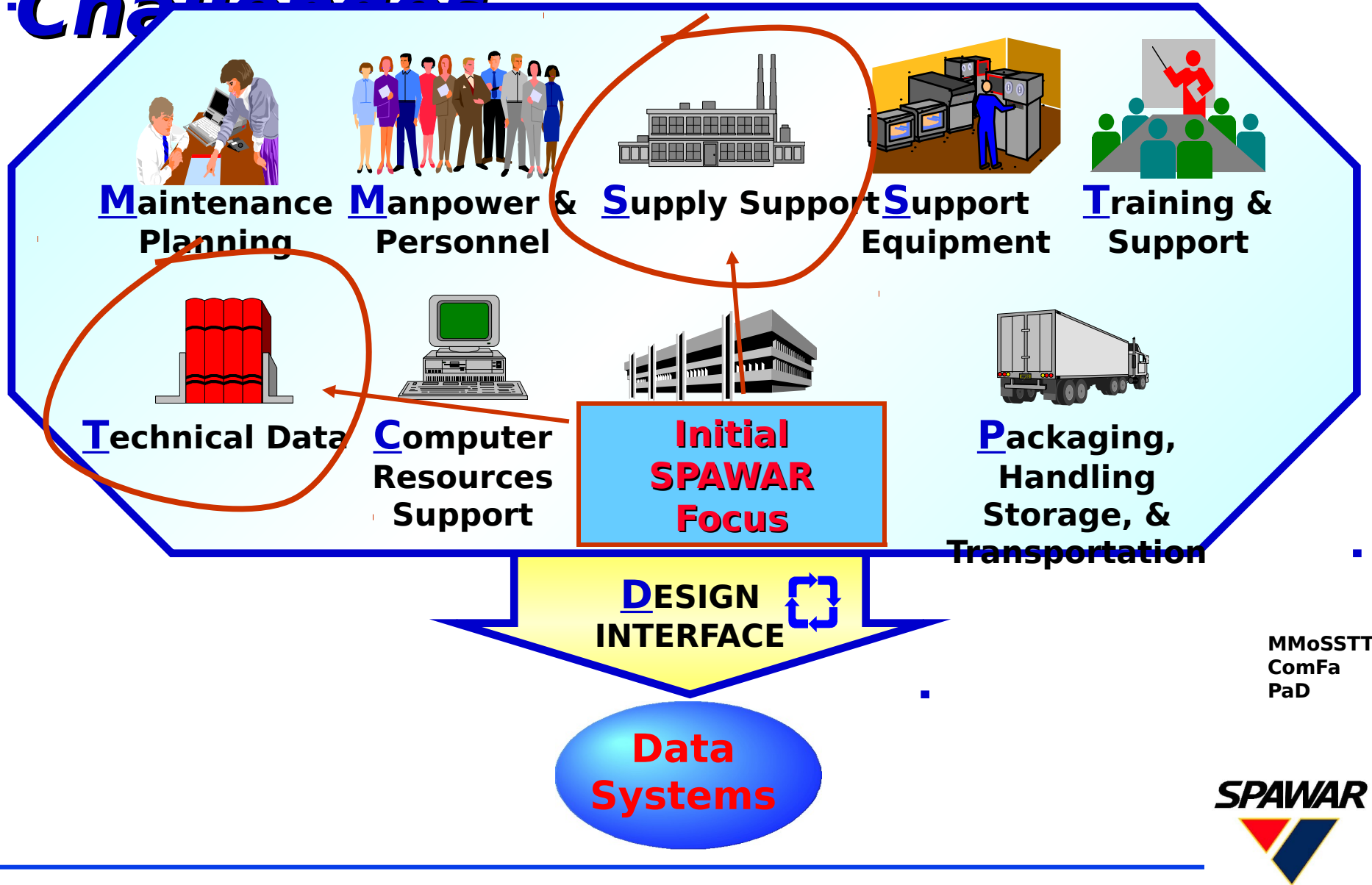**SPAWAR**

An Integrated "Data" Environment
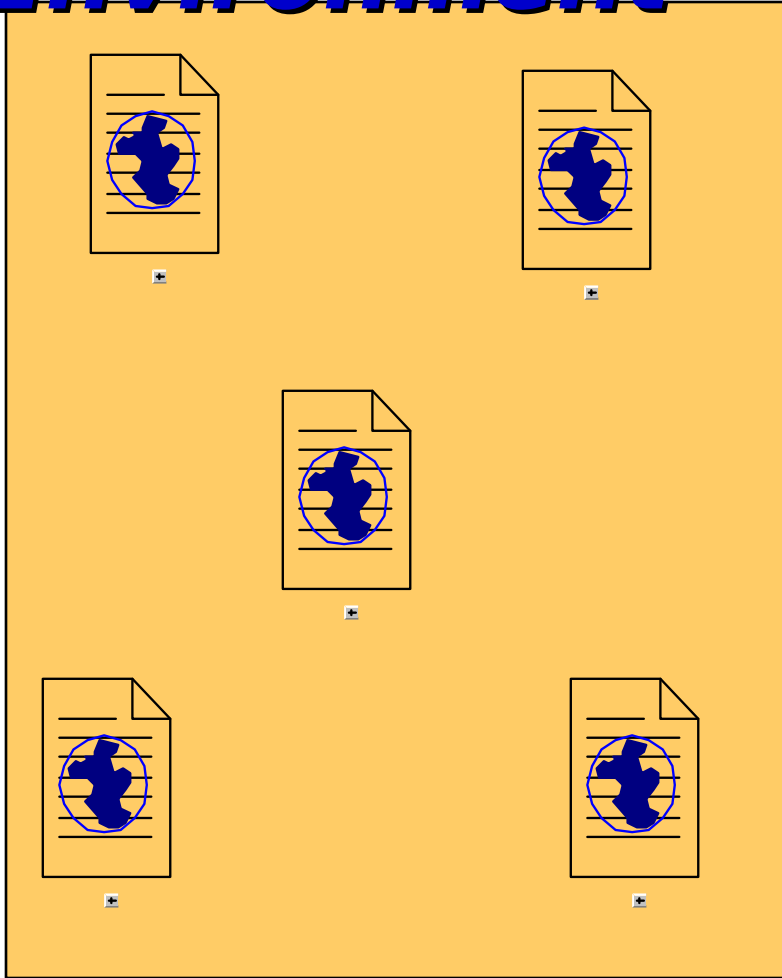
- **Is more than a collection of web-sites assembled via a portal**

- **Requires data sources**

  to have
  - ➢ Shared connectivity via Internet, NIPRNET, SIPRNET, NMCI/GIG
  - ➢ Shared data format via XML
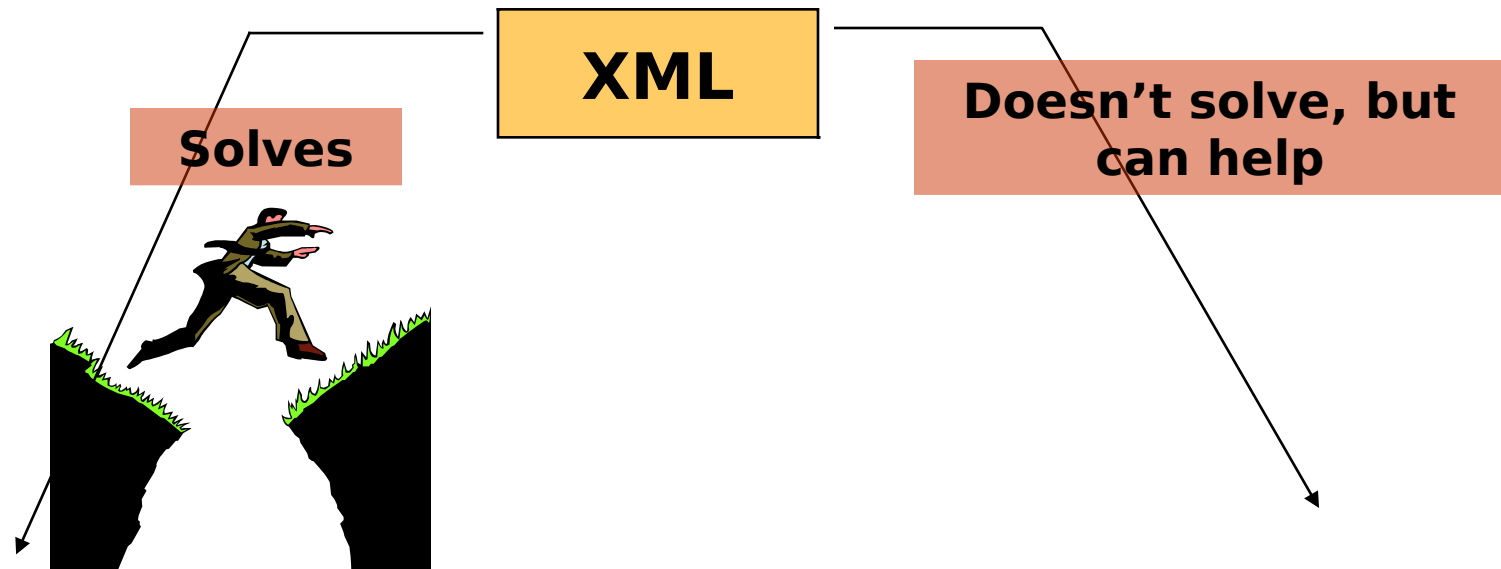 - ➢ Shared understanding via common XML grammars

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ILS Interoperability Data Challenges

Maintenance Planning

Manpower & Personnel

Supply Support

Support Equipment

Training & Support

Technical Data

Computer Resources Support

Initial SPAWAR Focus

Packaging, Handling Storage, & Transportation

DESIGN INTERFACE

Data Systems

MMoSSTT
ComFa
PaD

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A Word About XML

XML

Solves

Doesn't solve, but can help

- **Technology Issues**
  - Multiple proprietary data formats
  - Multiple closed protocols
  - Limited COTS support for GOTS / DOD proprietary solutions

- **Business Process / Culture Issues**
  - Security and data access
  - Semantics
  - Turf / Rice-bowl mentality

XML provides a technology solution that allows enterprises to focus on business process and cultural issues.

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Statement of Work

- **Material Asset Markup Language (MAML)**
  - ➢ Develop concept
  - ➢ Solicit participation
  - ➢ Provide collaborative environment
  - ➢ Develop initial schemas
  - ➢ Demonstrations

- **Documentation**
  - ➢ Support COE XML Registry Documentation Namespace
  - ➢ Develop schemas
  - ➢ Draft architecture implementation roadmap
  - ➢ Demonstration
  - ➢ Lessons learned

- **XML-MTF**
  - ➢ Support completion of standard

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Deliverables

- **MAML**
  - ✓ Concept paper
  - ✓ Initial participation solicitation and briefings
  - ✓ Kickoff conference
  - ✓ Web-based collaborative environment
  - ➢ Concept of operations, charter, and POA&M
  - ➢ Initial MAML schemas
  - ➢ Two demonstrations
    - – COTS repair parts (DD 1348-6)
    - – National Ammunitions (asset visibility of full-up rounds)

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Deliverables *continued*

- **Documentation**
  - ➤ Draft implementation plan
    - ✓ Strawman
  - ➤ Demonstration application
    - – Tool evaluation and selection complete
  - ➤ Lessons learned

- **XML-MTF**
  - ✓ XML-MTF mapping specification

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Facts

- **Internet technologies provide global connectivity never before achieved**

- **Garner Group Forecast**
  - ➢ Before the end of 2001 XML-based B2B transactions will account of 70% of all e-business

- **The DoD is dependant on COTS technology**
  - ➢ COTS is going toward XML and away from

Conclusion: DoD Logistics must position itself to take advantage of this explosion

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CINC Requirements

- **Logistics Interoperability**
  - Integrated Data Environment
    - Material Asset Visibility

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Implementation Strategy

- **Create a collaborative environment**
  - <u>Provide tools</u> to facilitate collaboration
  - Provide <u>basic guidelines</u> to ensure consistent development
  - Adopt a commercial approach → recommend vice mandate
  - Make it easy and attractive!

- **Work in cooperation with existing XML and metadata standards effort**
  - COE XML Registry (Logistics Namespace)
  - Logistics FDAd

- **Initial focus on two contexts**
  - C4ISR equipment – SPAWAR COTS concern
  - Ammunition – DLA IDE concern

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Vision – MAML

Where we are:

Were we want to be:

An integrated set of XML components describing classes of material assets, framed within the contexts of each community of interests' usage and business rules. This grammar shall be an on-going, evolving effort where by components are developed collaboratively by stakeholders with a direct interest in exchanging and accessing particular types of data. Oversight shall be exercised by the Logistics community , the Defense Logistics Management Standards Office, and the COE XML Logistics Namespace.

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What MAML Is and Is Not

- **MAML <u>is not</u>**
  - ➢ A software application
  - ➢ An end-to-end solution

- **MA**
  - ➢ A ... XML
  - ... sses
  - ➢ ...
    collaboratively developing MAML components

Implementation of MAML components in XML does not require software from any one specific vendor.

- **MAML uses**
  - ➢ Best of breed COTS tools for collaborative development
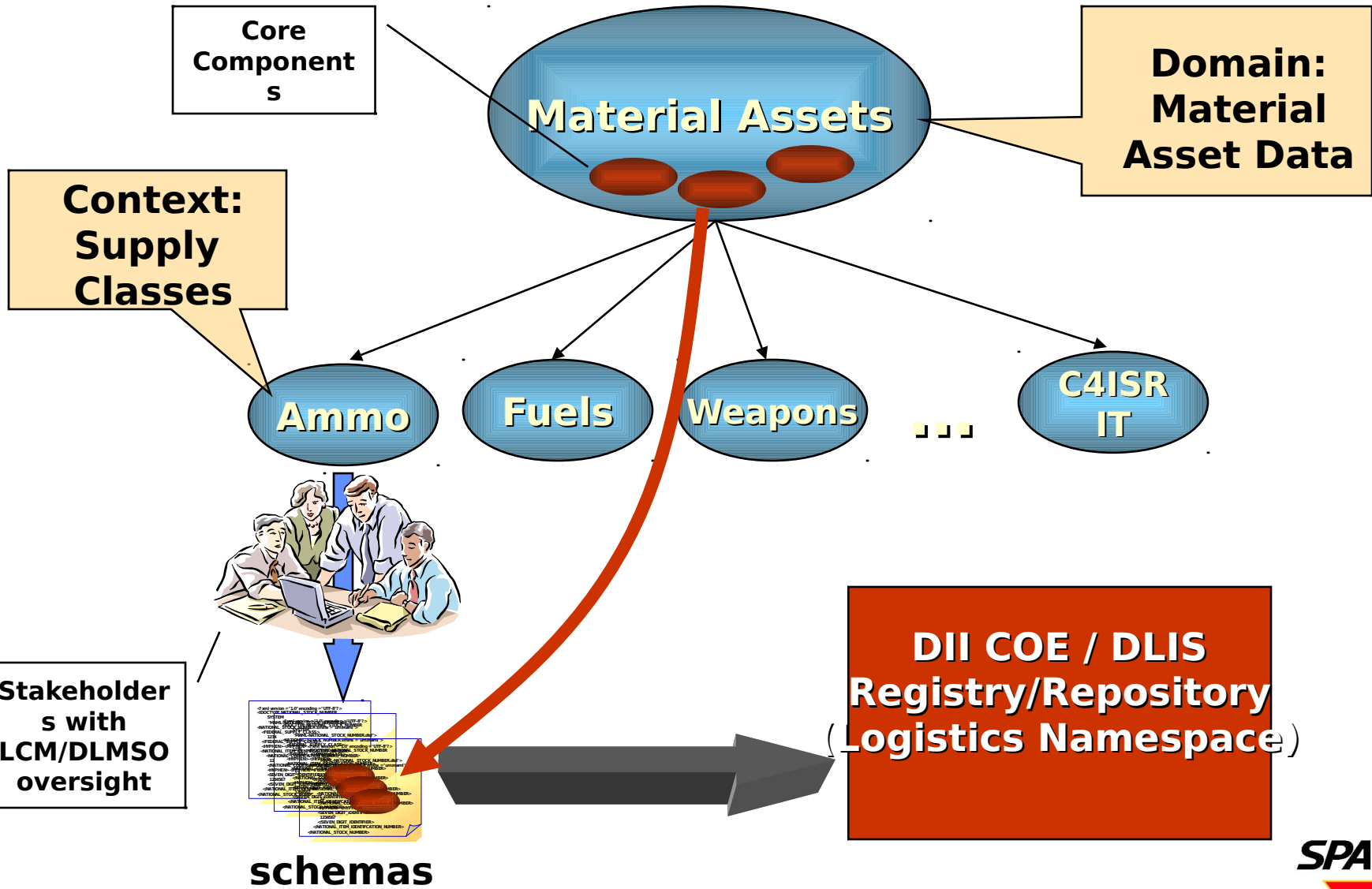
MAML: Yet Another Vocabulary?

- **Over 500 XML "vocabularies" present already**

- **MAML goal: provide agreed to components <u>for reuse</u> in any existing or yet to be developed XML vocabulary**

- **Not intended as an end-to-end solution**

- **Provide a first step to expressing DOD unique material asset information**

- <u>**Fundamental to solving the asset visibility problem**</u>

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Concept

Development Strategy

Core Components

Domain: Material Asset Data

Material Assets

Context: Supply Classes

Ammo   **Fuels**   **Weapons**   **. . .**   **C4ISR IT**

Stakeholders with LCM/DLMSO oversight

schemas

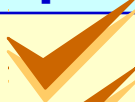**DII COE / DLIS Registry/Repository**
(Logistics Namespace)

SPAWAR
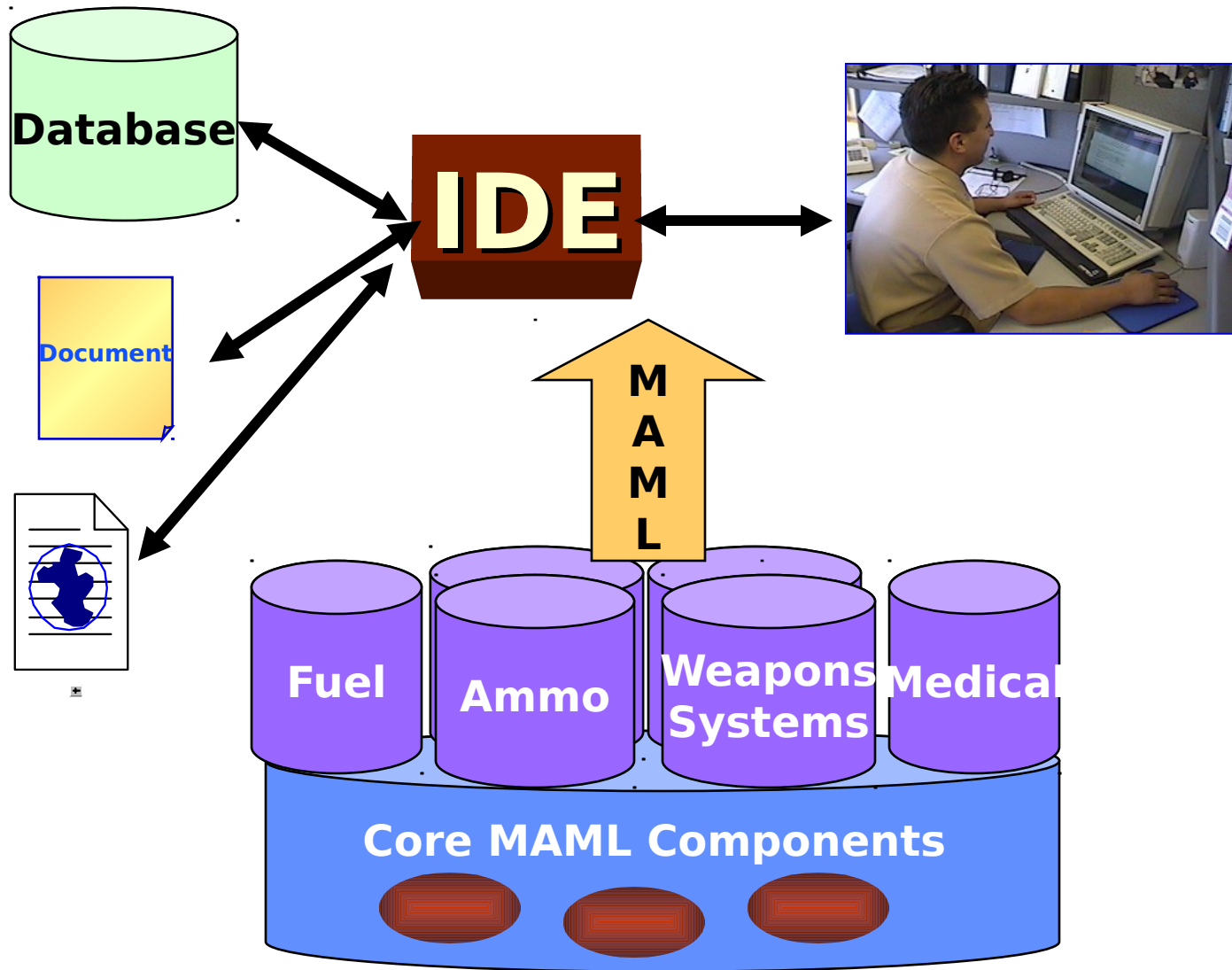
Advantages

✓ **Ground up, stakeholder driven**
  ➤ Self assembling, open, scalable

✓ **Adopt commercial strategy of recommending**
  ➤ Vice mandating

✓ **Logistics Community and FDAd oversight**

✓ **Provides immediate starting point for collaborative MAML development**

✓ **Compliant with Draft DISA XML Policy**

✓ **Complements existing XML efforts**
  ➤ COE XML Registry
  ➤ PDML

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Plan of Action and Milestones

Action Item	2001	Complete
• Concept Paper Promulgated	19 Jan	✔
• Concept Solicitations Conducted	15 Mar	✔
• Web Site Online	15 Feb	✔
• Concept Brief and Open Kickoff Complete	15 Mar	✔
• Collaboration Tool Online	15 Apr	
• Demonstration Design Complete	15 May	
• East/West Coast Training Complete	15 May	
• Begin Initial Demo Integration with DLIS XML Registry/Repository	15 Jun	
• Initial Demo at LCM	31 Jul	
• 2nd Demo Design Complete	15 Aug	
• 2nd Demo MAML	20 Nov	
• Out Brief	05 Dec	

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Summary

- **Narrow Scope**
  - ➤ Project focusing on material asset (supply) data and documentation
  - ➤ Key experience from industry → start with something small and manageable, but be able to grow

- **Provide incentive to collaborate**
  - ➤ XML is ubiquitous, flexible, and developer driven
  - ➤ Standards must be adopted willingly or not at all.
  - ➤ Provide tools and services and a non-threatening environment

- **Be able to grow!**

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